## JM1333KLN-6GK

### **Description**

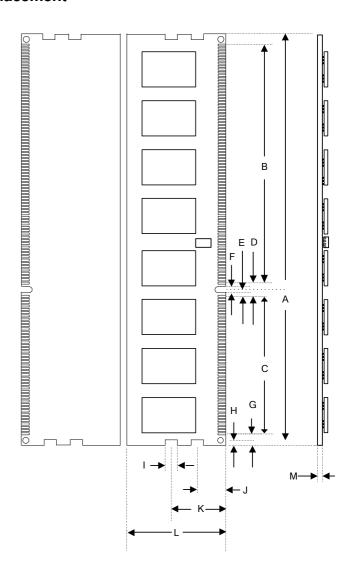
The JM1333KLN-6GK, a triple channel kits, consists of 3 pcs 2GB DDR3 SDRAM module. The 2GB module is a 256M x 64bits DDR3-1333 unbuffered DIMM. The 2GB module consists of 8pcs 256Mx8bits DDR3 SDRAMs in FBGA packages and a 2048 bits serial EEPROM on a 240-pin printed circuit board. The 2GB module is a Dual In-Line Memory Module and is intended for mounting into 240-pin edge connector sockets.

Synchronous design allows precise cycle control with the use of system clock. Data I/O transactions are possible on both edges of DQS. Range of operation frequencies, programmable latencies allow the same device to be useful for a variety of high bandwidth, high performance memory system applications.

#### **Features**

- RoHS compliant products.
- JEDEC standard 1.5V ± 0.075V Power supply
- VDDQ=1.5V ± 0.075V
- Clock Freq: 667MHZ for 1333Mb/s/Pin.
- Programmable CAS Latency: 6, 7, 8, 9
- Programmable Additive Latency (Posted /CAS): 0,
  CL-2 or CL-1 clock
- Programmable /CAS Write Latency (CWL) = 7
- · 8 bit pre-fetch
- Burst Length: 4, 8
- Bi-directional Differential Data-Strobe
- Internal calibration through ZQ pin
- On Die Termination with ODT pin
- Serial presence detect with EEPROM
- Asynchronous reset

#### **Placement**



PCB: 09-2810

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### **Dimensions**

Side	Millimeters	Inches				
A	133.35±0.15	5.250±0.006				
В	71	2.795				
C	47	1.850				
D	5	0.197				
Е	2.5	0.098				
F	1.5±0.10	0.059±0.039				
G	5.175	0.204				
H	2.311	0.091				
1	3±0.1	0.118±0.00394				
J	9.5	0.374				
K	17.3	0.681				
L	30±0.15	1.181±0.006				
М	1.27±0.10	0.050±0.004				

(Refer Placement)

### Pin Identification

Symbol	Function				
A0~A15, BA0~BA2	Address Inputs				
/RAS	Row Address Strobe				
/CAS	Column Address Strobe				
/WE	Write Enable				
/S0, /S1	Chip Selects				
CKE0, CKE1	Clock Enables				
ODT0, ODT1	On-die termination control				
DQ0~DQ63	Data Input/Output				
DQS0~DQS7	Data Ctraha				
/DQS0~/DQS7	Data Strobe				
DM0~DM7	Data Masks				
CK0, /CK0	Clacks Input				
CK1, /CK1	Clocks Input				
/RESET	Reset Pin				
VDD	Core and I/O Power				
VSS	Ground				
VREFDQ	location to Defend				
VREFCA	Input/Output Reference				
VTT	Termination Voltage				
VDDSPD	SPD Power				
SCL	SPD Clock Input				
SDA	SPD Data				
SA0~SA2	SPD Address				
NC	No Connection				

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### **Pinouts:**

Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin	Pin
No	Name	No	Name	No	Name	No	Name	No	Name	No	Name
01	VREFDQ	41	VSS	81	DQ32	121	VSS	161	NC	201	DQ37
02	VSS	42	NC	82	DQ33	122	DQ4	162	NC	202	VSS
03	DQ0	43	NC	83	VSS	123	DQ5	163	VSS	203	DM4
04	DQ1	44	VSS	84	/DQS4	124	VSS	164	NC	204	NC
05	VSS	45	NC	85	DQS4	125	DM0	165	NC	205	VSS
06	/DQS0	46	NC	86	VSS	126	NC	166	VSS	206	DQ38
07	DQS0	47	VSS	87	DQ34	127	VSS	167	NC	207	DQ39
80	VSS	48	NC	88	DQ35	128	DQ6	168	/RESET	208	VSS
09	DQ2	49	NC	89	VSS	129	DQ7	169	CKE1	209	DQ44
10	DQ3	50	CKE0	90	DQ40	130	VSS	170	VDD	210	DQ45
11	VSS	51	VDD	91	DQ41	131	DQ12	171	NC	211	VSS
12	DQ8	52	BA2	92	VSS	132	DQ13	172	NC	212	DM5
13	DQ9	53	NC	93	/DQS5	133	VSS	173	VDD	213	NC
14	VSS	54	VDD	94	DQS5	134	DM1	174	A12	214	VSS
15	/DQS1	55	A11	95	VSS	135	NC	175	A9	215	DQ46
16	DQS1	56	A7	96	DQ42	136	VSS	176	VDD	216	DQ47
17	VSS	57	VDD	97	DQ43	137	DQ14	177	A8	217	VSS
18	DQ10	58	A5	98	VSS	138	DQ15	178	A6	218	DQ52
19	DQ11	59	A4	99	DQ48	139	VSS	179	VDD	219	DQ53
20	VSS	60	VDD	100	DQ49	140	DQ20	180	A3	220	VSS
21	DQ16	61	A2	101	VSS	141	DQ21	181	A1	221	DM6
22	DQ17	62	VDD	102	/DQS6	142	VSS	182	VDD	222	NC
23	VSS	63	CK1	103	DQS6	143	DM2	183	VDD	223	VSS
24	/DQS2	64	/CK1	104	VSS	144	NC	184	CK0	224	DQ54
25	DQS2	65	VDD	105	DQ50	145	VSS	185	/CK0	225	DQ55
26	VSS	66	VDD	106	DQ51	146	DQ22	186	VDD	226	VSS
27	DQ18	67	VREFCA	107	VSS	147	DQ23	187	NC	227	DQ60
28	DQ19	68	NC	108	DQ56	148	VSS	188	A0	228	DQ61
29	VSS	69	VDD	109	DQ57	149	DQ28	189	VDD	229	VSS
30	DQ24	70	A10	110	VSS /DOS7	150	DQ29	190	BA1	230	DM7
31	DQ25 VSS	71 72	BA0 VDD	111	/DQS7	151	VSS DM3	191	VDD (DAC	231	NC VSS
32 33	/DQS3	72 73	WE	112 113	DQS7 VSS	152 153	NC NC	192 193	/RAS /S0	232 233	VSS DQ62
34 35	DQS3 VSS	74 75	/CAS VDD	114	DQ58	154	VSS	194	VDD ODT0	234	DQ63 VSS
36	DQ26	75 76	/S1	115 116	DQ59 VSS	155 156	DQ30 DQ31	195 196	A13	235 236	VSS VDDSPD
36	DQ26 DQ27	76 77	ODT1	117	VSS SA0	156	VSS	196	VDD	236	SA1
38	VSS	77 78	VDD	117	SAU	157	VSS NC	197	NC	237	SDA
39	VSS NC	78 79	NC	119	SGL SA2	158	NC NC	198	VSS	239	VSS
40											
40	NC	80	VSS	120	VTT	160	VSS	200	DQ36	240	VTT